

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1-2. (Canceled)
3. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion controls the size of the circulating air portion ( $V_s$ ) in the passenger compartment of the vehicle.
4. (Original) Method according to Claim 3, characterized in that the size of the circulating air portion ( $V_s$ ) in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment.
5. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) increases the circulating air portion ( $V_s$ ) in the passenger compartment when there is an increase in the outside temperature of the passenger compartment.
6. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) is a part of a cooling/heating device.
- 7-8. (Canceled)
9. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) adjusts the circulating air portion ( $V_s$ ) in the passenger compartment to approx. 80% when a person is located in the passenger compartment.

10-12. (Canceled)

13. (Currently Amended) System Sensor according to Claim ~~11~~ 22, characterized in that the CO<sub>2</sub> sensor for detecting hazardous gas concentrations in the passenger compartment and the temperature sensor for temperature compensation form a structural unit.

14. (Canceled)

15. (Currently Amended) System Sensor according to Claim ~~11~~ 22, characterized in that the control unit for the circulating air and/or intake air portion controls the size of the circulating air portion ( $V_s$ ) in the passenger compartment of the vehicle.

16. (Currently Amended) System Sensor according to Claim 15, characterized in that the size of the circulating air portion ( $V_s$ ) in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment.

17. (Currently Amended) System Sensor according to Claim ~~11~~ 22, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) increases the circulating air portion ( $V_s$ ) in the passenger compartment when there is an increase in the outside temperature of the passenger compartment.

18. (Currently Amended) System Sensor according to Claim ~~11~~ 22, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) is a part of a cooling/heating device.

19. (Canceled)

20. (Currently Amended) System ~~Sensor~~ according to Claim ~~11~~ 22, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) adjusts the circulating air portion ( $V_s$ ) in the passenger compartment to approx. 80% when a person is located in the passenger compartment.

21. (New) Method to regulate a circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in a passenger compartment of a vehicle, the method comprising:

detecting a hazardous gas concentration of  $\text{CO}_2$  in the passenger compartment according to the principle of photometric gas measurement at wavelengths of  $4.2\ \mu\text{m}$  and  $4.3\ \mu\text{m}$  and at a reference wavelength of between  $3.8\ \mu\text{m}$  and  $4.0\ \mu\text{m}$ ;

sensing a temperature;

generating a triggering signal ( $I_{\text{CO}_2}$ ) based on the detected hazardous gas concentration;

compensating the triggering signal ( $I_{\text{CO}_2}$ ) based on the sensed temperature;

supplying the temperature-compensated triggering signal ( $I_{\text{CO}_2}$ ) to a control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in a passenger compartment;

supplying a temperature signal ( $I_t$ ) from a sensor for sensing the temperature to the control unit;

with the control unit, regulating the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in the passenger compartment based on the temperature-compensated triggering signal ( $I_{\text{CO}_2}$ ) and based on the temperature signal ( $I_t$ ), the control unit inducing the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (CL), the hazardous gas concentration threshold value (CL) in the passenger compartment being selected at approximately 0.2% by volume  $\text{CO}_2$ .

22. (New) System for regulating a circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in a passenger compartment of a motor vehicle, the system comprising:

a control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in the passenger compartment;

a temperature sensor for sensing a temperature, the temperature sensor generating a temperature signal ( $I_t$ );

a CO<sub>2</sub> sensor for detecting hazardous gas concentrations in the passenger compartment, a CO<sub>2</sub> concentration in the passenger compartment being measured by the CO<sub>2</sub> sensor via a wavelength-specific weakening of electromagnetic radiation in the infrared range, the CO<sub>2</sub> sensor detecting the CO<sub>2</sub> concentration in the passenger compartment according to the principle of photometric gas measurement at wavelengths of 4.2  $\mu\text{m}$  and 4.3  $\mu\text{m}$  and at a reference wavelength of between 3.8  $\mu\text{m}$  and 4.0  $\mu\text{m}$ , the CO<sub>2</sub> sensor generating a triggering signal ( $I_{\text{CO}_2}$ ), the triggering signal ( $I_{\text{CO}_2}$ ) being temperature-compensated based on the sensed temperature;

wherein the control unit regulates the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in the passenger compartment based on the temperature-compensated triggering signal ( $I_{\text{CO}_2}$ ) and based on the temperature signal ( $I_t$ ), the control unit inducing the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (CL), the hazardous gas concentration threshold value (CL) in the passenger compartment being selected at approximately 0.2% by volume CO<sub>2</sub>.